

# Section 508 and Website Accessibility



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# Introduction and Goals

- What web accessibility means and the legal requirements for accessibility
- What are the standards for web accessibility?
- What are the recommended steps to take to address web accessibility issues?

# Who are you?

- Do you represent a school, business, or a government organization?
- Are you responsible for web accessibility?
- What is your level of understanding of web accessibility?
  - **A**: You have an *awareness* that it exists
  - **U**: You *understand* the standards and tools
  - **I**: You are *implementing* accessibility now

# Overview of presentation

- Introduction and overview
- IT barriers, accessibility, and legal requirements
- Web Accessibility Standards
  - WAI current and future
  - Section 508
- Web Accessibility Roadmap

# Common IT Barriers

**Software that requires the use of a mouse to perform commands is inaccessible to people with disabilities that cannot use a mouse.**

# Common electronic equipment barriers

**A copier that has controls outside of accessible reach ranges is inaccessible for some persons who use wheelchairs.**

# Internet Barriers

Most Internet sites use images to convey information.



# Internet Barriers

However, if these images are not labeled, users who use screen readers cannot access them.



**Go to [discovernd.com](http://discovernd.com), the official site for North Dakota State Government programs and services.**



# Internet Barriers

If these images are mislabeled, then users who use screen readers cannot understand them.



**kwajex.gif (45k)**



**mailbox**

# Internet Barriers

If these images are flashing at a high rate, they can cause seizures in people with photosensitive epilepsy.

# Internet Barriers

If the site uses color to portray information, people with visual impairments like color blindness may not be able to access that information.

# Internet Barriers

If the colors used in a site have poor contrast, it may be difficult for some users to read.

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# Internet Barriers

If the site has multiple navigation links, it may be repetitive for users who use the keyboard to navigate the site.

# Legal Requirements for Accessibility



# Americans with Disabilities Act (ADA)

- **“Prohibits discrimination on the basis of disability in employment, programs and services provided by state and local governments, goods and services provided by private companies, and in commercial facilities.”**



# Americans with Disabilities Act (ADA)

- **Title II of the ADA requires that programs and services offered by state and local government, including public educational settings, when viewed in their entirety, be accessible to individuals with disabilities unless creating a such access causes a fundamental alteration or undue financial or administrative burden.**

# Americans with Disabilities Act (ADA)

- **Title III of the ADA requires that public accommodations make reasonable modifications (unless such modifications cause fundamental alteration or undue burden) so that individuals with disabilities have the opportunity to participate on an equal basis or benefit equally from their goods, services, and facilities.**

# Americans with Disabilities Act (ADA)

- **The ADA was passed in 1990 and does not specifically address access to online resources and other electronic and information technology.**

# Americans with Disabilities Act (ADA)

**ADA requires effective communication.**

**According to the US Department of Justice:**

**“Covered entities under the ADA are required to provide effective communication, regardless of whether they generally communicate through print media, audio media, or computerized media such as the Internet. Covered entities that use the Internet for communications regarding their programs, goods or services must be prepared to offer those communications through accessible means as well.”  
(Opinion letter dated 9/9/1996)**

# Section 504 of the Rehabilitation Act

- **Similarly to the ADA, Section 504 does not specifically reference or prescribe accessibility of Web-based or other information resources, but includes requirements that apply to accessibility of Electronic and Information Technology (E&IT).**

# Section 504 of the Rehabilitation Act

- **504 requires that educational entities that receive federal funding make their programs and services accessible to qualified individuals with disabilities unless doing so creates a fundamental alteration or undue burden.**

# Section 504 of the Rehabilitation Act

- **504 also requires that educational entities provide reasonable accommodations in employment for qualified people with disabilities unless doing so creates an undue hardship.**

# Section 508 of the Rehabilitation Act

- **Section 508 of the Rehabilitation Act Amendments of 1998 requires that when federal departments and agencies procure, develop, use, maintain, or upgrade E&IT they must ensure that it complies with the 508 standards developed by the Access Board, unless doing so would pose an undue burden on the federal department or agency.**



# Section 508 of the Rehabilitation Act

- **Section 508 applies to the federal government. Some state governments have adopted the 508 standards for their websites. There is some question about whether or not states receiving federal funding are required to comply with Section 508.**

# Section 508 of the Rehabilitation Act

- **Section 508 includes a set of minimum standards for web design.**

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# Questions

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# Web Accessibility Standards



# Web Accessibility Standards

- Web Accessibility Initiative (WAI) standards
  - Web Content Accessibility Guidelines (WCAG)
  - Current version is 1.0, May 1999
  - Version 2.0 is in preparation
- Section 508 Standards
  - US Access Board's Guidelines

# Web Accessibility Standards

- WWW Consortium (W3C) has a Web Accessibility Initiative (WAI) to develop Web accessibility guidelines.
- Web Content Accessibility Guidelines (WCAG) has been an official W3C Recommendation since May 5, 1999.
- WCAG 2.0 is out as a Draft, dated 22 August 2002.

# WAI: WCAG 1.0 Guidelines

The WCAG 1.0 lists fourteen guidelines, and additionally provides a list of checkpoints for each guideline.

There are a total of 65 checkpoints.

Each checkpoint has been assigned a priority level from 1 to 3.




# WAI: WCAG 1.0 Guidelines – cont'd

Priority 1 checkpoints address barriers that make access *impossible* for one or more groups of users.

Priority 2 and Priority 3 checkpoints address barriers that make access *difficult* and *somewhat difficult*, respectively.



# WAI: WCAG 1.0 Conformance Levels

- **Conformance Level "A"**: all Priority 1 checkpoints are satisfied; 
- **Conformance Level "Double-A"**: all Priority 1 and 2 checkpoints are satisfied; 
- **Conformance Level "Triple-A"**: all Priority 1, 2, and 3 checkpoints are satisfied; 

# WAI: WCAG 1.0 Guidelines – cont'd

The full content of the WCAG 1.0, along with a wide variety of supporting documentation, is available at <http://www.w3.org/TR/WCAG10>.

# Sec 508 of the Rehab Act

*Electronic and Information Technology  
Accessibility Standards* as posted by the U.S.  
Access Board in the Federal Register on  
December 21, 2000. ([www.access-  
board.gov/508.htm](http://www.access-board.gov/508.htm))

Subpart B – Technical Standards.

1194.22 Web-based Intranet and Internet  
information and applications.

16 guidelines outlined in paragraphs (a) to (p).

# Sec 508 Guidelines

- (a) Provide a text equivalent for every non-text element, including both images and animated objects.
- (b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.
- (c) Web pages should be designed so that all information conveyed with color is also available without color, for example from context or markup.

# Sec 508 Guidelines – cont'd

- (d) Documents shall be organized so they are readable without requiring an associated style sheet.
- (e) Redundant text links shall be provided for each active region of a server-side image map.
- (f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.

# Sec 508 Guidelines – cont'd

- (g) Row and column headers shall be identified for data tables.
- (h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.
- (i) Frames shall be titled with text that facilitates frame identification and navigation.

# Sec 508 Guidelines – cont'd

- (j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.
- (k) A text-only page, with equivalent information or functionality, shall be provided to make a Web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.

# Sec 508 Guidelines – cont'd

- (l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by assistive technology.
- (m) When a Web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies.



# Sec 508 Guidelines – cont'd

- (n) When electronic forms are designed to be completed on-line, the form shall allow people using assistive technology to access the information field elements, and functionality required for completion and submission of the form, including all directions and cues.
- (o) A method shall be provided that permits users to skip repetitive navigation links

# Sec 508 Guidelines – cont'd

- (p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.

# North Dakota Policy DP005-001

- **Accessible Web Development policy**
- **Requires conformance at the “AA” level to the WCAG 1.0**
- **New web sites**
  - as of Sept 1, 2001
- **Existing web sites**
  - as of June 30, 2003

# Accessibility Standards Resources

- W3C WAI site
  - <http://www.w3.org/WAI/>
- Access Board Web site, Section 508 page
  - [www.access-board.gov/508.htm](http://www.access-board.gov/508.htm)
- Trace R&D Center
  - <http://www.tracecenter.org/world/web/>
- ITTATC – IT Tech Assist and Training Center
  - [www.ittatc.org](http://www.ittatc.org)

# Accessibility Testing Resources

- Watchfire (Bobby test tool - commercial)
  - <http://www.watchfire.com/solutions/accessibility.asp>
- WAVE (Free tool, now at WebAIM site)
  - <http://wave.webaim.org/index.jsp>
- UsableNet (LIFT tool - commercial)
  - <http://www.usablenet.com/>
- Bookmarklets (or Favelets)
  - <http://www.accessify.com/tools-and-wizards/accessibility-checking-favelets.asp>

# Web Accessibility Roadmap



# Web Accessibility Roadmap

- If you don't have a destination, then any road will take you there.
- What is our destination?
- Our goal is to design websites that are usable by every user
- This is a lofty and difficult to achieve goal

# Goal: Design for everyone

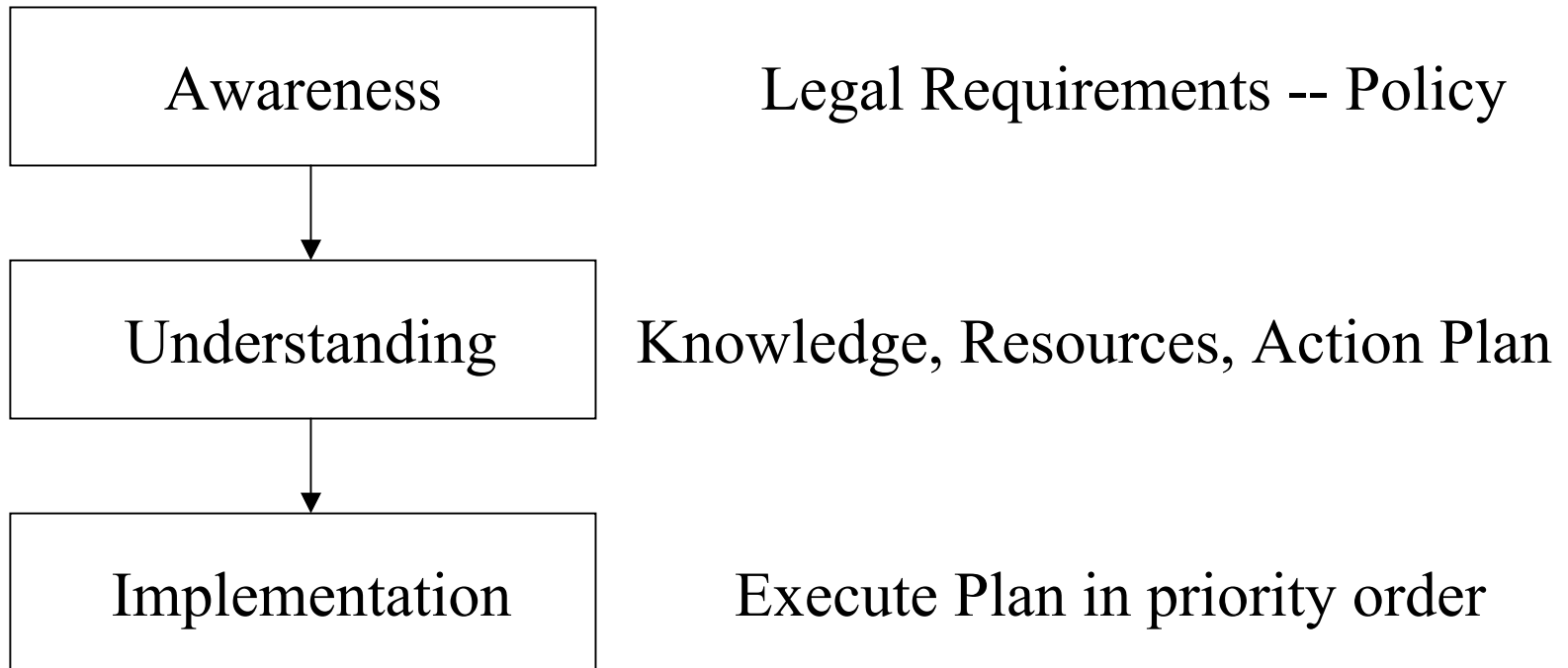
- People using screen readers
- People who are deaf or hard of hearing
- People who can't use a mouse
- People who are color blind
- People with differences in attention/perception



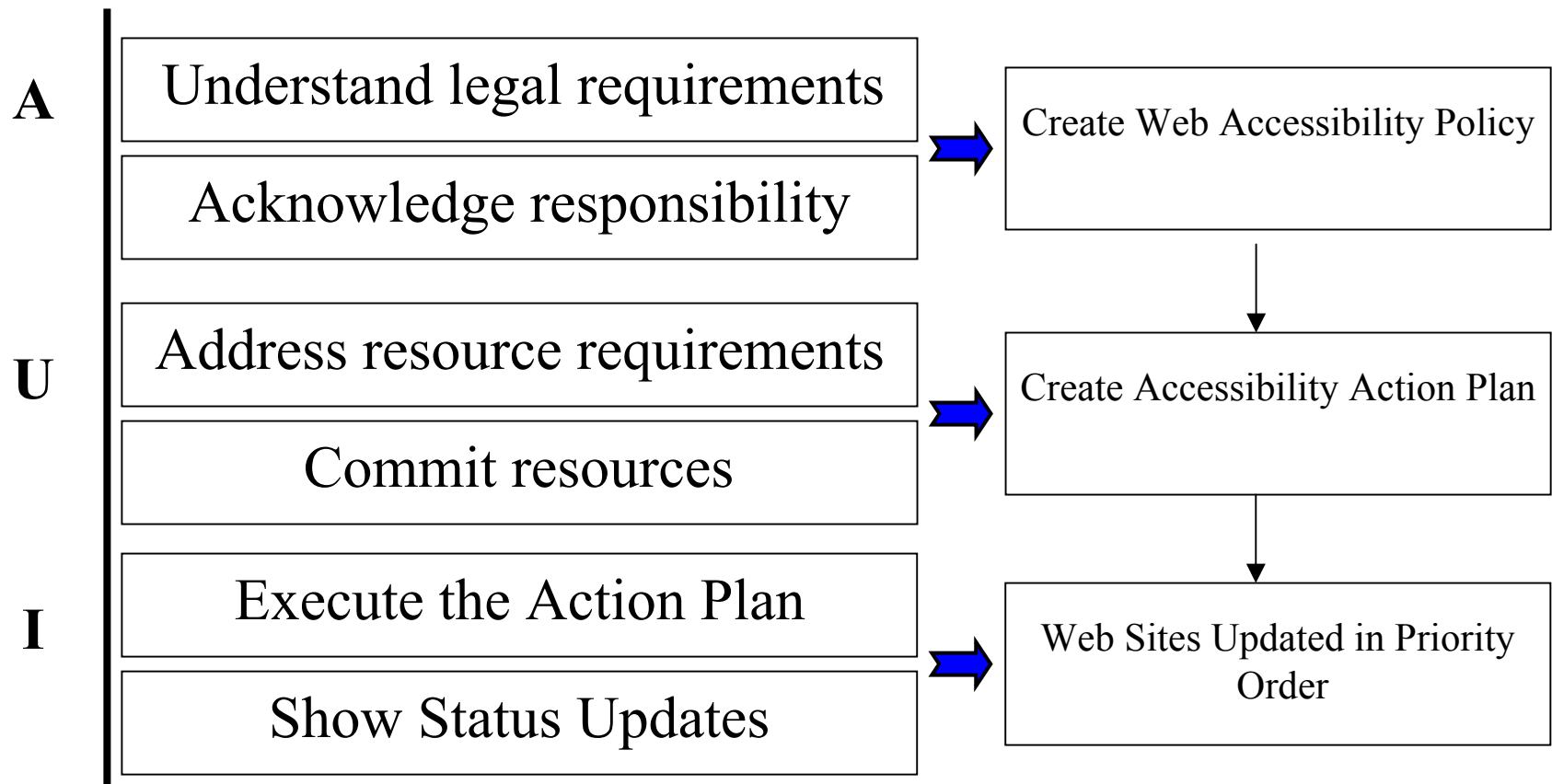
# Goal: Design for everyone

- People using different web browsers
- People using different screen resolutions
- People using phone web services
- People using handheld display units
- People using car computing systems

# Overview of the Roadmap



# Accessibility Roadmap



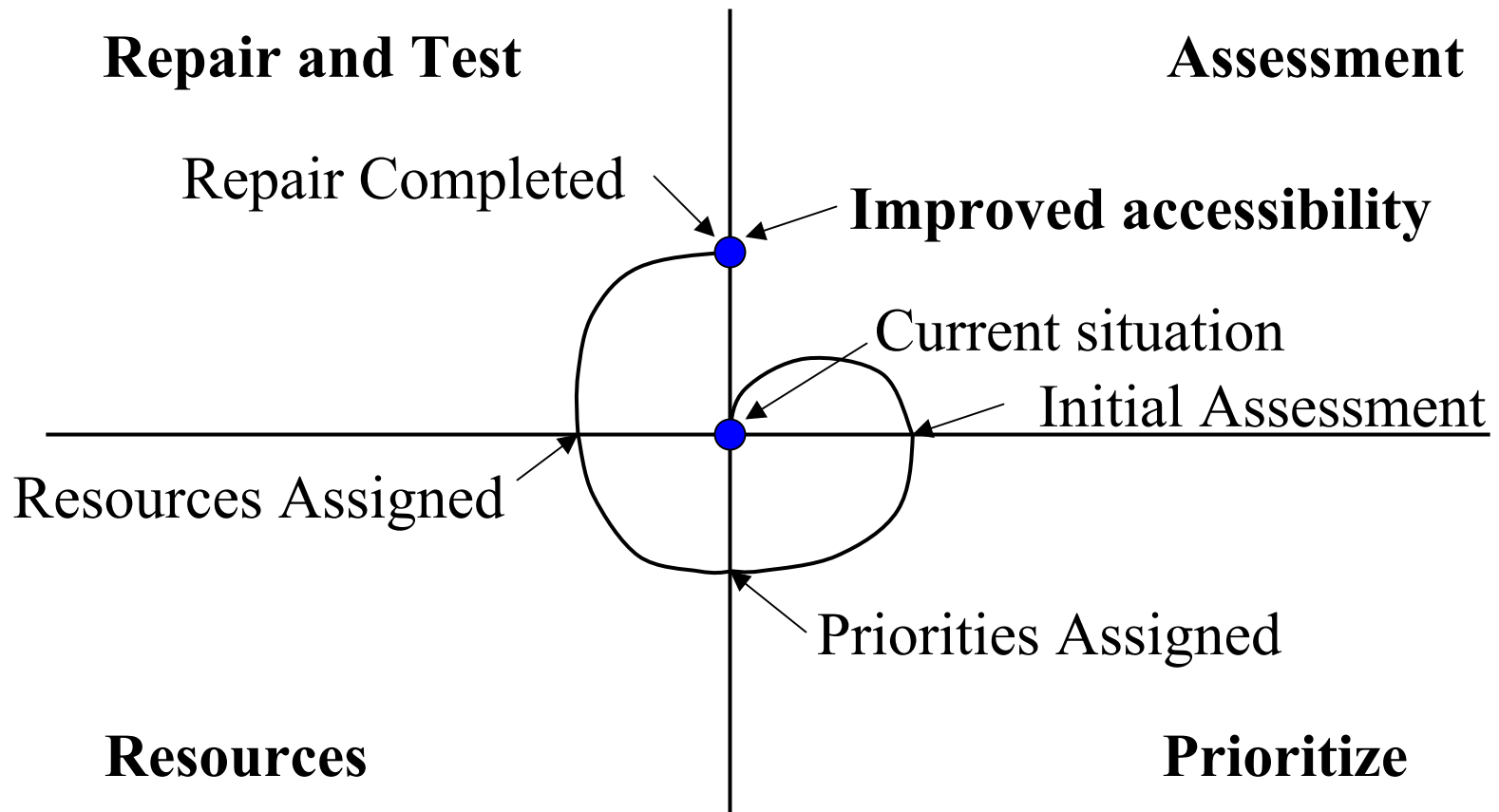
# Recognize that you are never “Done”

- This is a dynamic environment
  - New websites
  - New technologies (e.g., distance learning)
  - New users
  - New tools and techniques
  - New standards
- This is an ongoing process – like painting the Golden Gate bridge

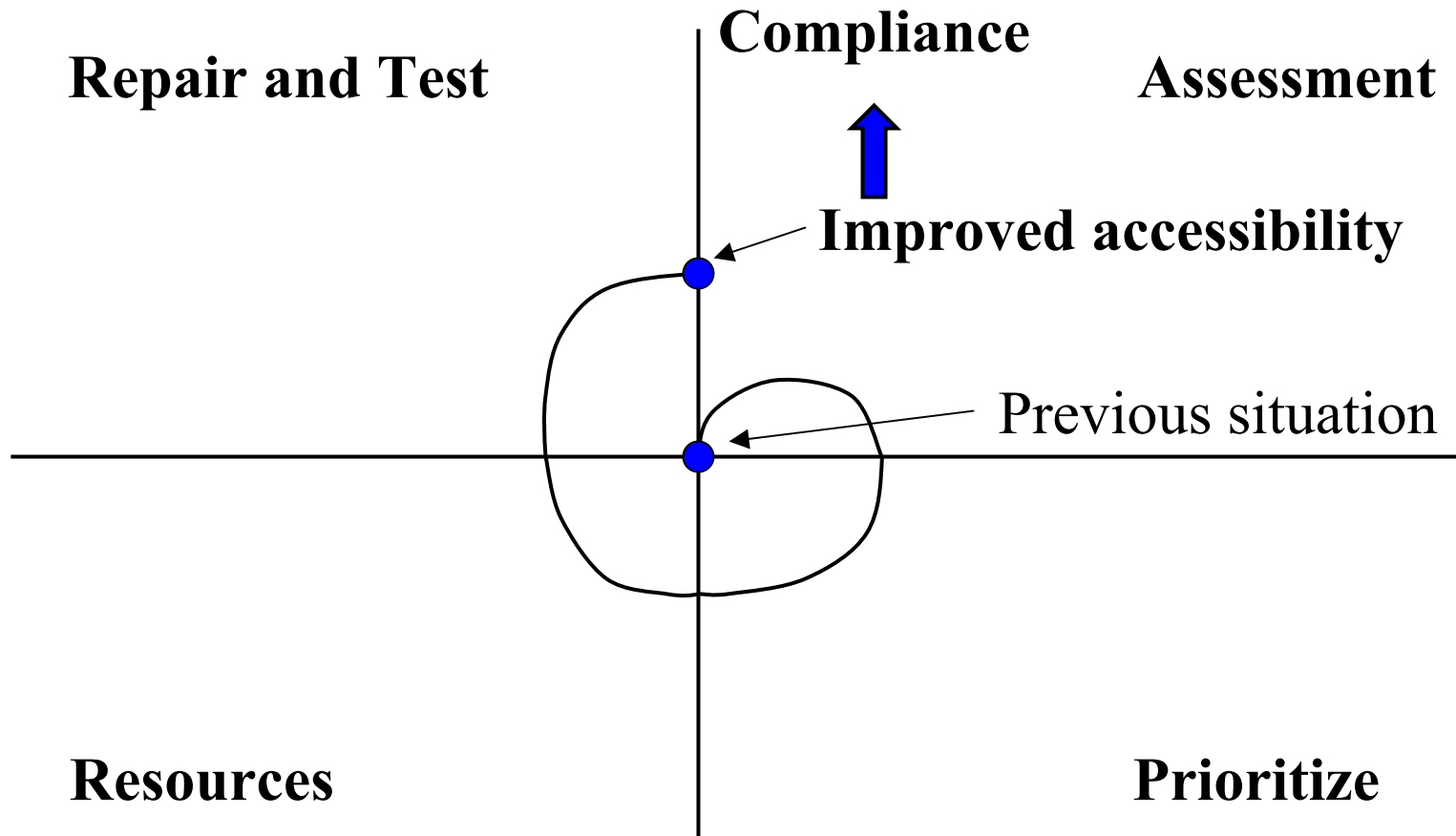
# Web Accessibility is “Iterative”

- *Iteration* means “A procedure in which a cycle of operations is repeated, often to approximate the desired result more closely. ”
- You can’t do everything at one time
- Think of a spiral, moving out from the center
- The center is your current situation
- The “end” of the spiral is your goal

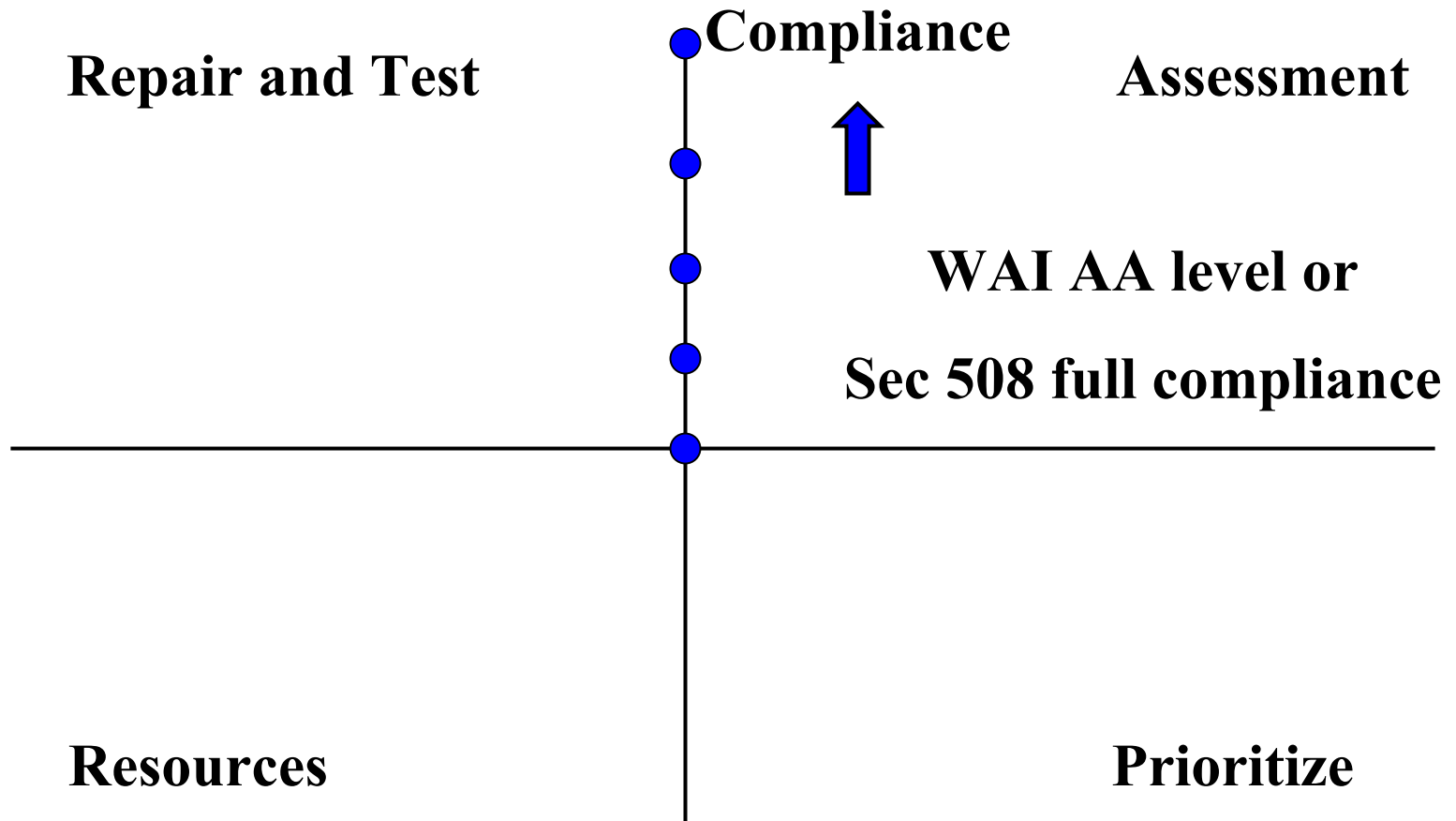
# Spiral Model of Web Accessibility



# Spiral Model of Web Accessibility

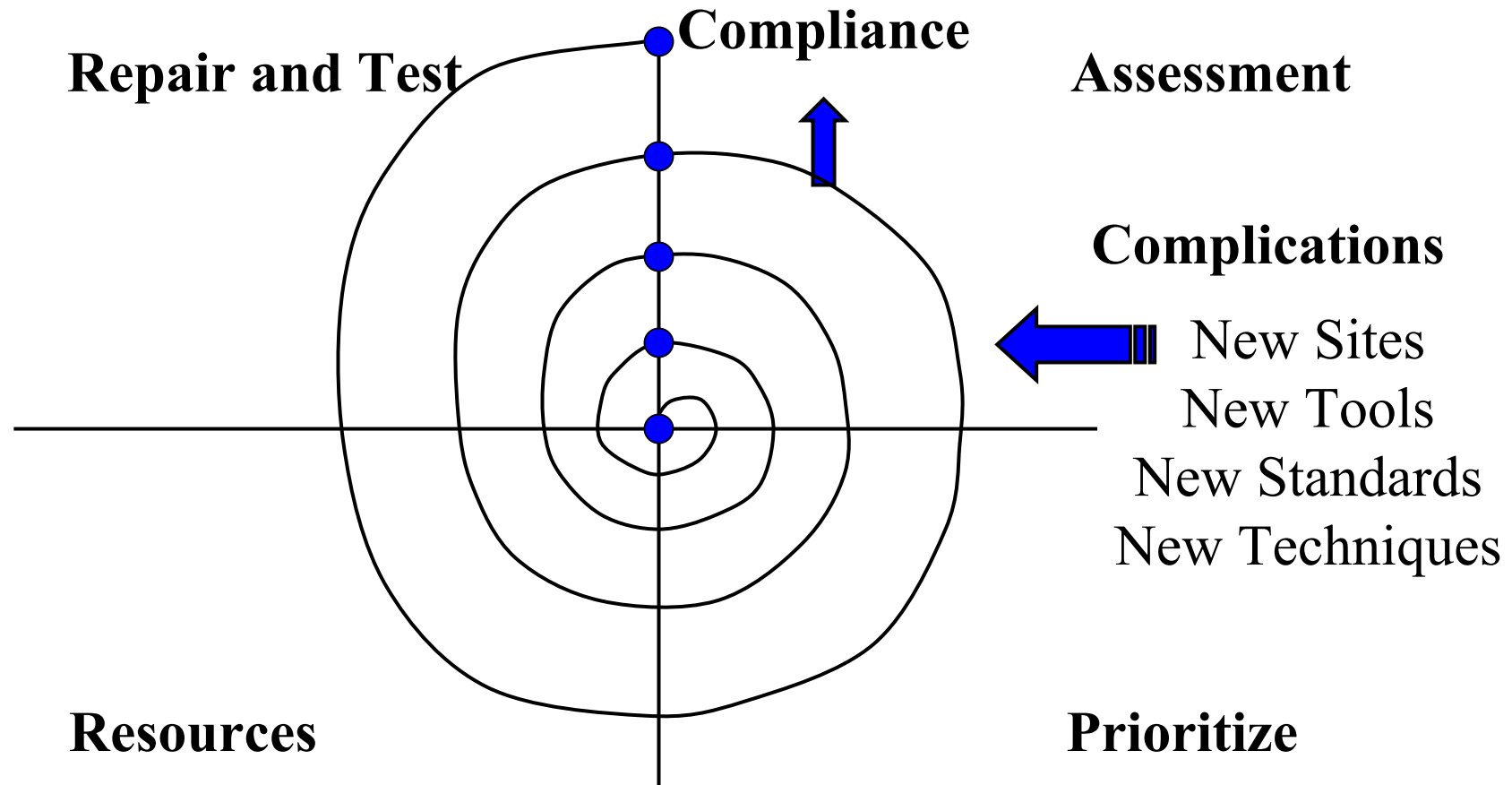


# Spiral Model of Web Accessibility





# Spiral Model of Web Accessibility



# Roadmap Review

- Start with Awareness and get the policy-making level of the institution involved.
- Create a Web Accessibility Policy
  - Select a minimum compliance level (e.g., WAI AA)
- Get a commitment for resources
  - People, equipment, tools, training
- Create a Web Accessibility Action Plan with enforcement procedures

# Roadmap Review – cont'd.

- Perform an initial assessment of the accessibility of the websites (first spiral)
- Prioritize the repairs to be made:
  - “creating accessible Web pages for core institutional information such as course work, registration, advising, admission, catalogs, and student services information”. UW-M policy
- Organize the resources to do the repairs

# Roadmap Review – cont'd.

- Execute the repairs and test the results
- Publish a Progress Report on Web Accessibility periodically
- Repeat the spiral, tracking progress toward compliance over time.

# Remember our goal:

Our goal is to design websites that are usable by every user.

If your websites aren't accessible, then it is time to start making them accessible.

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# Questions

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